

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Frederick A. Perner et al

Confirmation No.: 2670

Application No.: 10/806709

Examiner: LE, Thong Quoc

Filing Date: Mar 23, 2004

Group Art Unit: 2827

Title: Soft Reference Three Conductor Magnetic Memory Storage Device

Mail Stop Amendment  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- ( ) under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- (X) under 37 CFR 1.97 (c) together with either a:  
( ) Statement under 37 CFR 1.97(e), or  
(X) a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ( ) under 37 CFR 1.97 (d) together with a:  
( ) Statement under 37 CFR 1.97(e)(1) or (2), and  
( ) a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$180.00 . At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

(X) Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individuals(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

(X) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: APR 4, 2006

OR

( ) I hereby certify that this paper is being transmitted to the Patent and Trademark Office facsimile number \_\_\_\_\_ on \_\_\_\_\_  
Number of pages: \_\_\_\_\_

Typed Name: Eileen Lehmann

Signature: Eileen Lehmann

Respectfully submitted,

Frederick A. Perner et al

By Eileen Lehmann

Eileen Lehmann

Attorney/Agent for Applicant(s)

Reg. No. **39272**

Date: **APR 4, 2006**

Telephone No.: **650 857 7940**



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1

of 2

**Complete if Known**

|                        |                    |
|------------------------|--------------------|
| Application Number     | 10/806709          |
| Filing Date            | March 23, 2004     |
| First Named Inventor   | Frederick A Perner |
| Art Unit               | 2827               |
| Examiner Name          | LE, Thong Quoc     |
| Attorney Docket Number | 200308998-1        |

**U. S. PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|-----------------------|--------------------------|--|--------------------------------|--|---|
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
|                       |                          | US- 20030169620                          | 09-11-2003                     | Sharma et al                                       |   |
|                       |                          | US- 20030057461                          | 03-27-2003                     | Tran et al   |   |
|                       |                          | US- 6358757                              | 03-19-2002                     | Anthony  |   |
|                       |                          | US- 20050174836                          | 08-11-2005                     | Sharma et al                                       |   |
|                       |                          | US- 6,188,615                            | 02-13-2001                     | Perner et al.                                      |   |
|                       |                          | US- 20030111626                          | 06-19-2003                     | Hosotani   |   |
|                       |                          | US- 6,191,577                            | 02-20-2001                     | Sasaki et al.                                      |   |
|                       |                          | US- 6,248,416                            | 06-19-2001                     | Lambeth et al.                                     |   |
|                       |                          | US- 2004/0170054                         | 09-02-2004                     | Mattheis et al.                                    |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |

**FOREIGN PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Foreign Patent Document   | Publication<br>Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>Or Relevant Figures Appear | T <sup>6</sup> |
|-----------------------|--------------------------|---|-----------------------------------|--|---|----------------|
|                       |                          | Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known) |                                   |  |   |                |
|                       |                          | EP 1061592  | 12-20-2000                        | Matsushita Elec                                    |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |
|                       |                          |   |                                   |  |   |                |

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

|                        |                    |
|------------------------|--------------------|
| Application Number     | 10/806709          |
| Filing Date            | March 23, 2004     |
| First Named Inventor   | Frederick A Perner |
| Art Unit               | 2827               |
| Examiner Name          | LE, Thong Quoc     |
| Attorney Docket Number | 200308998-1        |

Sheet 2 of 2

**NON PATENT LITERATURE DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|-----------------------|--------------------------|---|----------------|
|                       |                          | A.E. Berkowitz et al. "Exchange Anisotropy- A Review", Journal of Magnetizm and Magnetic Materials 200(1999) 552-570 (12 March 1999)  |                |
|                       |                          | J. Nogues, Ivan K. Schuller "Exchange Bias", Journal of Magnetizm and Magnetic Materials 192(1999) 203-232 (5 March 1998)   |                |
|                       |                          |   |                |
|                       |                          |   |                |
|                       |                          |   |                |
|                       |                          |   |                |
|                       |                          |   |                |
|                       |                          |   |                |
|                       |                          |   |                |
|                       |                          |   |                |

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.